

Claims

What is claimed is:

1. A clip for engaging a flange attached to a portable electronic device to enable the device to be attached to a desired object, the clip comprising:
 - a housing comprising a housing wall and a cradle for receiving the flange;
 - a back plate having on a proximal side thereof means for attaching the clip to an object;
 - a latch comprising
 - a detent extending through an orifice in the housing wall into the cradle,
 - a wing having a distal surface with a lifting slope, and
 - a tongue-engaging surface on a proximal side; and
 - a latch release comprising
 - a release button,
 - a resiliently flexible tongue extending downwardly from the release button and engaging the tongue-engaging surface of the latch,
 - a displacement tine extending downwardly from the release button, the displacement tine having a displacement ramp on a proximal surface, the displacement ramp engaging the lifting slope of the wing;

wherein the displacement ramp interacts with the lifting slope to displace the latch proximally when the release button is pressed, and the resiliently flexible tongue urges the latch distally when the release button is not pressed.
2. The clip of claim 1 wherein the means for attaching the clip to an object comprises a belt-engaging hook.
3. The clip of claim 1 wherein the housing, back plate, latch and latch release consist essentially of non-metallic material.
4. The clip of claim 1 wherein the housing, back plate, latch and latch release consist essentially of plastic.
5. The clip of claim 1 wherein the resiliently flexible tongue extends centrally down the housing and the tongue-engaging surface is on the proximal side of the central portion of the latch.

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6. The clip of claim 5 wherein the latch release comprises a displacement tine extending downwardly on each side of the resiliently flexible tongue, each displacement tine having a displacement ramp engaging a lifting slope on each of two wings extending laterally from the central portion of the latch.

7. A metal-free clip for a portable telephone or other electronic device, the clip comprising:

- a housing comprising a cradle for receiving a flange attached to the device, and a housing wall with an orifice communicating with the cradle and an interior of the housing;
- a back plate closing the housing, the back plate being attached to a belt-engaging hook;

- a one-piece latch comprising

- a central portion having a detent on a distal surface extending through the orifice into the cradle,

- a tongue-engaging surface on a proximal surface of the central portion, and

- a pair of wings extending laterally from the central portion, each wing having a lifting slope on its distal surface; and

- a one-piece latch release comprising

- a release button disposed in an orifice in the top of the housing,

- a central, resiliently flexible tongue extending downwardly into the housing from the release button, the lower portion of the flexible tongue riding along the tongue-engaging surface of the latch,

- a pair of displacement tines extending downwardly into the housing from the release button, the lower portion of each displacement tine having a displacement ramp on the proximal surface interacting with the lifting slope of one of the wings.

8. The metal-free clip of claim 7 wherein each component consists essentially of plastic.

9. The metal-free clip of claim 7 wherein the displacement ramps interact with the lifting slopes of the wings to displace the latch proximally and withdraw the detent from the cradle when the release button is pressed, and the flexible tongue urges the latch distally to extend the detent into the cradle when the release button is not pressed.

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10. The metal-free clip of claim 7 wherein the tongue-engaging surface of the latch comprises a groove in which the lower portion of the flexible tongue rides.

11. An all plastic clip comprising:

a housing comprising a cradle for receiving an attachment to a portable electronic device, an orifice in a housing wall communicating with the cradle, and an opening for a release button;

a back plate closing the housing;

a latch inside the housing comprising a lifting slope and a detent extending through the orifice into the cradle; and

a latch release comprising

a release button disposed in the opening,

a displacement tine extending from the release button to the lifting slope, the displacement tine having a displacement ramp interacting with the lifting slope, and

a resiliently flexible tongue biasing the latch into a position in which the detent extends into the cradle;

wherein, when the release button is pushed, the displacement ramp interacts with the lifting slope to displace the latch out of the position in which the detent extends into the cradle.

12. The all plastic clip of claim 11 wherein the latch release is integrally formed of one-piece construction.

13. The all plastic clip of claim 11 wherein the resiliently flexible tongue extends from the release button to a central portion of the latch and rides along a tongue-engaging surface of the latch.

14. The all plastic clip of claim 13 wherein the latch release comprises a pair of displacement tines, one of the displacement tines extending from the release button on each side of the resiliently flexible tongue.

15. The all plastic clip of claim 13 wherein the detent is disposed on the central portion of the latch on the opposite side of the tongue-engaging surface.

16. The all plastic clip of claim 11 wherein the detent is disposed on a central portion of the latch, the latch further comprising a pair of wings extending laterally from the central portion, each wing having a lifting slope.

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17. The all plastic clip of claim 16 wherein the resiliently flexible tongue extends from the release button to the side of the central portion opposite the detent.

18. The all plastic clip of claim 17 wherein the latch release comprises a pair of displacement tines, one of the displacement tines extending from the release button on each side of the resiliently flexible tongue, and the displacement ramp of each displacement tine interacting with one of the lifting slopes of one of the wings.